

National Health Interview Survey 50-case Field Test Observations Of Audio Computer-assisted Self-interview (ACASI) Conducted November 2011

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Introduction

This report summarizes the findings of the field test observations designed to evaluate the Audio Computer-assisted Self-interview (ACASI) system developed by THE Questionnaire Design Research Laboratory (QDRL) at the National Center for Health Statistics (NCHS) for the National Health Interview Survey (NHIS). This report is based on 27 observations conducted in the eastern seaboard within 75 miles of Washington, DC between November 16 and 23, 2011. Eight observers underwent training by the QDRL staff and travelled to observation sites.

The main goals of the observation of the field test were 1) To assess the performance of the ACASI instrument in the field under normal conditions with Field Representatives who usually perform the interviews 2) Observe respondents reactions to the ACASI system, and 3) identify and work on any major flaws the system had before engaging in the next field test.

The following section outlines how analysis of the data from the observations was conducted. The final section of the report provides a detailed analysis of results of the observations.

Methodology

Sample

Fifty field interviews were conducted in Maryland, Virginia, and Pennsylvania by nine Census Bureau Field Representatives (interviewers) who have experience with the NHIS. Census pre-identified blocks of addresses through a convenience sample for inclusion in this field test. All addresses included in the block were eligible to participate in this field test, and from each sample the interviewer was expected to complete nine interviews or cases. Twenty-seven of the fifty NHIS interviews were observed, and the observers entered notes into Q-notes, a software system designed to record cognitive interview data.

Procedure

For this field test only the family component,¹ and the sample adult component² (Barnes 2012; Information Dissemination Staff 2012) of the NHIS were administered before the

¹ The family component includes questions asked of all members of the family. This component verifies and collects demographic information on each member from each family in the house and collects data on topics including health status and limitations, injuries, healthcare access and utilization, health insurance, and income and assets.

ACASI module was presented. The NHIS Field Representatives were accompanied by an observer from either the National Health Interview Survey (NHIS), the Questionnaire Design Research Laboratory (QDRL), or Census. All observers signed both the NCHS and the Census nondisclosure forms. As a guide, observers used the ACASI Observer Notes/Debriefing protocol (Appendix 2) developed by the QDRL in order to systematically record notes in the interview setting. All observers were trained on the ACASI Observer Notes protocol and in the use of Q-notes analysis software prior to observation.

Due to the length of the NHIS we have not included it in this report. However, it can be accessed online at <http://www.cdc.gov/nchs/nhis.htm>. The ACASI questions administered appear in Appendix 1 and include questions on sexual identity, alcohol use, sleep, financial well-being, height, and weight.

Data Analysis

Two types of data were collected during this field test. The first type, the quantitative data, was inputted directly into the laptops and analyzed separately from the data in this report. This report focused on the second type of data, the qualitative observer data. The qualitative data was gathered from the observations made by the field observers trained by QDRL staff. The observations sought to gather detailed information that is not generally captured during the NHIS interview. Some of this detailed information included the location of the interview, interruptions during the interview, the presence of others during the interview, the overall atmosphere during the interview, and descriptions of the distractions that played a role during the interview. Another area that observers took note was the CAPI to ACASI transition. Observers were instructed to describe how the interviewer transitioned from using the computer to giving the computer to the Respondent for use. In addition observers noted if the Field Representatives followed the script and any problems that occurred during the transition. Making observations about the transition allowed us to identify patterns in both the script for the transition and the mechanics of the transition in order to improve the process.

Data from the observations were analyzed using qualitative techniques, specifically, conceptual ordering (Corbin 2008) and the constant comparative method (Corbin 2008; Glaser 1967; Ragin 1989). After data were entered into the Q-Notes software, patterns of observation, interpretation and problems in the field test were identified. Our first step of data analysis, open coding, entailed reviewing the data and then naming and defining the analytic categories found in the data, a strategy Corbin and Strauss term Conceptual Ordering (2008). For example, each of the observer notes was reviewed to build concepts and categories of observations. We were interested in the presence of others during the ACASI portion of the interview, thus we reviewed the observer notes to identify patterns in the changes of the presence of others during the ACASI portion of the interview. This coding was done for each of the questions in the observer protocol. Next, we performed axial coding, which involved refining the themes and categories that emerged from open coding. This was done across several questions in the observer protocol. For example,

² The sample adult collects additional information from one adult per family.

we looked at the variety of problems that emerged during the transition between the CAPI and ACASI and categorized these problems distinctively as either a problem with the Field Representative or a challenge generated by the respondent. Finally we performed selective coding, which involved specifying the core themes that emerged from the analysis. Selective coding helped integrate the different core themes. For instance, we determined that the problems that emerged during the CAPI to ACASI transition due to the Field Representative errors, upon further analysis we were able to connect this theme to another theme, the Field Representative own comfort with the use of technology. The connection of these two themes provided the conclusion that we needed to provide better training in the transition between CAPI and ACASI.

Summary of Findings

Based on the analysis of the observations during the 50 case field test, in particular the transition between the CAPI portion of the interview and the ACASI portion of the interview, we recommend that Field Representative receive more training. Three areas need to be emphasized in training; first training must emphasize the transition script. The script is a tool to use in the field to reduce the amount of questions and problems Field Representatives will face with respondents. By increasing the proficiency in the use of the transition script some of the problems observed during the field test can be reduced. Some of these problems include lengthy and time consuming transition time due to the FR's lack of familiarity with the transition, providing confusing directions to respondents, and explaining the importance of the use of ACASI. The second area in which training needs to improve is in balancing the emphasis of the importance of maintaining the privacy of ACASI and at the same time avoiding activities that make questions in ACASI appear any more intrusive than questions respondents answered in the CAPI portion. Lastly, training should also emphasize the reasons for ACASI implementation. If FRs understand why ACASI is been implemented they are also more likely to "buy into" the new program and work on proper implementation.

Based on the observations during this field test we found that once respondents put on the headphones to start ACASI, the dynamics of the room changed. With the headphones, others were not able to listen to the questions and responses, creating more privacy for respondents. Few problems were observed in terms of laptop usability. Those that were observed were easily solved by the Field Representatives. For instance, when a respondent tried to use the screen as a touchscreen the Field Representative informed her that she needed to use the keyboard. Below is the detailed analysis of the observations.

Findings

CAPI interview

The CAPI portion of the interview took, on average, 50 minutes. There were some variations in time depending on the number of follow-up questions that were prompted, which are based on how respondents answered questions related to health conditions and health insurance. There were also variations due to interruptions and distractions in the

environment. The shortest CAPI interview was 28 minutes. Below the observer accounts for the length of the interview:

FR paraphrased questions and worked quickly through the interview. R had no health conditions and no health insurance so the number of questions was minimized (00000146)

On the other hand, the longest CAPI interview took 95 minutes to complete. The observer in this interview reported that the Respondent had serious health problems which required numerous follow up questions. The interview was made longer by interruptions including phone calls, text messaging, visits, and taking care of things around the house.

These cases exemplify three problems that ran through the CAPI portion of the interviews, including: 1) paraphrasing of NHIS questions (not following NHIS protocol) 2) interruptions to the interview by the daily activities surrounding participants' lives, and 3) the presence of other individuals during the interview.

All twenty-seven observed interviews were conducted inside participants' homes. Access to respondents' homes was higher than is usually the case with NHIS interviews. This can be explained by the convenience sample used in this field test. Field Representatives were given a sector or block of addresses instead of a list of addresses as is the typical protocol for NHIS. If a household refused to participate the FR was instructed to move on to the next address and was not required to return to non-cooperative addresses. Once inside the household, six of the interviews took place in the dining area at the dining table, five either in a breakfast bar or a table in the kitchen, ten in the living room, and one in a living room that also served as a bedroom. (See table below)

Location of Interview

	dining area	kitchen area	Living room	living/ bedroom	missing
Cases	6	5	10	1	4

Because all the interviews took place inside the respondent's household, the laptop computers were only in two locations, either on the FR's lap or on top of a table (see table below).

Location of Computer During CAPI

	Interviewer's lap, sitting down	Table
Cases	13	14

Observers were asked to report on who was present during the CAPI portion of the interview. The table below shows who was present during the interview.

Presence of Others During CAPI Interview

	No one	One or more adults, not within hearing range	One or more adults in hearing range some of the time	One or more adults within hearing range entire interview	Small children with adult within hearing range entire interview	Small children with adult some of the time	Small children only	pets
Cases	6	4	7	2	2	2	4	3

In six of the 27 observations the Respondent was alone during the CAPI portion of the interview; in four other cases there were one or more persons somewhere in the household but not within hearing range. This did not reduce privacy during the interview. In eight of the observed interviews children were present during at least some part of the interview; four had children only present, and four had a combination of children and adults present. The reason why the distinction is made between children and adults is that the distractions that an adult creates are different than those that a child creates. In the table above, “small children” refers to children who are less than five years old. These are children that observers noted required attention and interrupted in order to get snacks, drinks, and ask questions. We discuss this topic further in this section. This type of interruption is different than when an adult interrupts and stays within hearing range. Furthermore, parents and caretakers may feel more comfortable disclosing information in front of a child than in front of another adult.

In addition to who was present during the interview, observers evaluated the atmosphere of the interview and described the distractions. The table below shows that ten interviews were conducted under quiet and calm conditions with few interruptions and minimal noise. Twelve interviews took place with some level of noise or interruptions occurring, while four were extremely chaotic and noisy to the point that the noise was disruptive to the interview.

Atmosphere During Interview

Cases	Extremely chaotic and noisy, disruptive to interview	Some noise or interruptions	Very quiet and calm, ideal for interview
4	4	12	10

The descriptions of noise levels in the interview ranged from barely noticeable or what was described as “white noise” (such as a television in an adjacent room), to construction noise coming from the floor above where the interview was taking place. In this latter case the observer noted that the construction workers remained in the interview area and had a conversation while the interview took place. Once that conversation was over one

of the workers remained in the household and continued the construction work. Below, the observer offers comments on the situation:

He was in and out of the front door several times to get equipment from his vehicle. The respondent got up from the interview to check on what this person was doing. (00000153)

Noise was often accompanied by other distractions such as interruptions by other adults and children. Children's interruptions consisted of requests for food or drinks or for attention. They were also curious about what the FR and observer were doing inside the household. All the children observed were under the age of five. Children pose a particular type of distraction because they are dependent on a caretaker for the majority of needs, and therefore respondents tended to turn their attention to meeting the needs of children. When only young children were present respondents may be more willing to share personal information because they believe the children do not fully understand the information that the adults are discussing. The following description exemplifies the challenges of interviewing with the distractions of children:

The R was taking care of her 2 young children (ages 2 and 4) during the interview. She was juggling many tasks during parts of the interview, such as fixing the boys' lunches, cleaning up in the kitchen, and attending to her youngest son who tripped and fell down and was crying. Midway through the interview we had to pause so that the R could go put the 2-year old down for an afternoon nap. Later on, he woke up and was crying and we had to pause the interview again. Then the telephone rang several times and the R had to stop to answer the phone. The first two phone calls were very brief (< 30 seconds), but the last phone call was important and lasted at least 7-8 minutes. Her oldest son (who is 6 years old) got in trouble for hitting another boy at school and his teacher was calling to discuss what had happened and how to discipline her son. (00000152)

Nonetheless, the biggest culprits of interruptions were phones, including home phones and mobile devices. A third of observed interviews were disrupted by phone calls or text messaging. During interviews they were a constant source of interruption and distraction. This pattern is exemplified in the following example:

During the Q&A process [the thing that was distracting] was the cell phone calls and texts. R would send and receive texts while attempting to answer questions ... The young girl came in during the injury and poisoning questioning, during the family interview, and stayed through the family and most of the sample adult interview. At one point she was messing with ring tones on the R's cell phone ... Then, during the health status and limitations section of the adult interview (about halfway through the adult interview), the R and the young girl had a long side conversation in the foyer.

Although an extreme case of distractions, this example demonstrates the challenges for respondents when trying to answer questions while distracted by a mobile device. Respondents in other cases appear to be unfazed by text messages, games, email and

other distractions. Nonetheless these micro-interruptions create a distraction and slow down the interview process, making an already long interview even longer. Unfortunately, there are few solutions to this problem.

Transition from CAPI to ACASI

The transition between the end of the CAPI portion of the interview and the respondent's first keystroke in ACASI took an average of 2.2 minutes, with a maximum of 9 minutes and a minimum of 15 seconds. This transition included a script that FRs had to follow to move respondents from CAPI to ACASI. During this transition the computer is moved from the FR to the Respondent. In all instances observed the FR moved the laptop to face the Respondent while at the same time explaining that it was the Respondent's turn to use the computer to answer questions. Once the FR turned the computer to the Respondent, the respondent did not move the computer (18 cases) or moved it very little (4 cases). During ACASI, all interviewers remained inside the homes.

FRs were trained to use a transition script. The transition required FRs to show respondents where the questions would appear on the screen, as well as the location of the keys respondents would use. FRs also explained the use of the headphones and demonstrated how to adjust the volume of the headphone cover. The transition was implemented with varied degrees of success. The table below shows the types of challenges that FRs faced while trying to implement the transition protocol. In three cases the observer was unable to determine if the FR was following the script.

Field Representatives Problems during CAPI to ACASI transition

	FR followed the script	FR didn't follow script	Observer got involved	Observer didn't know if script was followed	FR didn't show key location	FR needed further direction	FR created distractions
cases	8						
cases		13					
cases			1	3	4	1	2

In some cases the FRs attempted to utilize the script that was provided, and in other cases the script was not used word-for-word. When FRs did not follow the script, they used their own versions, adding elements and instructions to make themselves clear. In some cases where FRs veered from the script, mistakes were made. For instance, the following observation makes this clear:

The FR followed the script in that he read the initial screen (ACASINTR). However, he then introduced the keys to the R while the instrument was still situated on the first instruction screen. The second screen which includes instructions to the FR to present the keys to the respondent is ignored (since the info was already covered by the FR at the first screen). This creates some confusion for the R because the FR thinks the R is at the start of the tutorial [first ACASI screen] when in fact the R was staring at an FR instruction screen. Once

the FR figured this out and advanced the instrument [to the first ACASI screen]
the R had no problems from that point forward (00000004)

In other cases, by not following the script provided the FRs created a set of expectations about the questions in ACASI that may bias the respondent's responses. Below the observer narrates this scenario:

The interviewer explained that the next portion would be taken by herself on the computer with audio. He also explained that it would ask more personal questions, due to the close proximity and engagement of the R's friend who was sitting next to her. (0000002)

Here the FR emphasized the intrusive nature of the ACASI questions, something that is not part of the protocol and was not included in the training.

A number of FRs that did not follow the provided script, including 15 of the observed interviews, and they had no problems setting up the ACASI for the respondents and getting the module started. The example below shows how an FR added to the script:

FR did read the script for the transition, nonetheless FR added to the script an explanation of the functions of the keys. FR added that the green key with an arrow was to go forward the blue key was to go back and the key with a circle was to select. She also explained where the volume control was located and how to turn it up and down. In terms of the script for the headphones the FR followed the exact script. (00000268)

This suggests that if FRs are comfortable with the transition protocol they can successfully start the ACASI program. Problems arise when FRs are not fully comfortable with the transition protocol and the script.

A primary problem for FRs was the use of two transition screens between CAPI and ACASI. If FRs did not follow the script and instead provided all the information to the respondent in the first screen and gave the respondent the laptop with the second screen, respondents were confused on what to do in this screen. This was because the screen did not have instructions for the respondent. Several respondents asked FRs how to start the program or sat for a few seconds waiting for something to happen. This confusion can be dealt with by reducing the number of screens in the transition from two to one. One screen can have all the information that the FR needs to give to the respondent allowing for a more effective transition to ACASI. Then, when turning the laptop to the respondent, the first screen that the respondent sees would be a screen with instructions on how to enter the system. This will reduce confusion and improve the transition. In one case the FR got stuck in this particular location and needed help from the observer to start the ACASI portion of the interview. This type of problem can be dealt with by reducing the transition to one screen and training FRs on the transition protocol.

A second area of concern is the use of headphones. FRs struggled to put the covers provided on the headphones and most of the transition time was used to do this. Sponsors

need to find a more practical way of handling the headphones. Some suggestions include providing larger covers, or giving a new set of headphone for participants which they can then keep after the interview.

Headphone Use

Cases	R didn't want to use headphones	FR struggled with earphone cover	Problem connecting to laptop	No problem
22	2	3	2	15

When participants wanted to use their own headsets FRs had to “think on their feet” and figure out how to make these headsets work. In several instances it was not possible to make them work. Field Representatives and observers discovered that headsets with a USB connection did not work with the present laptop setup but the analog corded plug version of any headset did work. Instructions and details on how to deal with these potential options need to be made available during FR ACASI training. Once the connection to the laptop was figured out and the headphones were set up all respondents kept the headphones on for the duration of ACASI.

A last area of concern with respect to the transition from CAPI to ACASI is that some FRs did not follow protocol and violated the respondent's privacy. In one instance the FR sat next to the respondent and had access to the laptop screen. In a second instance the respondent did not want to use the computer and the FR offered to have the observer sit with the respondent and press the buttons on the computer, inputting the answers while the computer read the questions without the headphones. This example not only violated procedure but the privacy of the respondent. FRs need enhanced training to understand the importance of privacy for the ACASI portion of interview.

In general the transition was smooth and respondents had few negative reactions to the use of a computer. Of the 27 observed interviews only one respondent expressed apprehension about using the computer.

ACASI

The ACASI interview module took respondents an average of 8.4 minutes to complete. The shortest time recorded was five minutes and the longest was 20 minutes. Respondents with the shorter completion times figured out in the first few questions they could stop the voice from speaking and could jump ahead to their selections by pressing the white key with the red circle to select an answer. The respondent that took the longest time, 20 minutes, reported listening to every question and response before making a selection. All respondents that started ACASI finished it.

When respondents put on the headphones to start ACASI, the dynamics of the room changed. With the headphones, others were not able to listen to the questions and responses, creating more privacy for respondents (see table below).

Presence of Others During ACASI Portion of Interview

	No one	One or more adults, not within hearing range	One or more adults in hearing range some of the time	One or more adults within hearing range entire interview	Small children with adult within hearing range entire interview	Small children with adult some of the time	Small children only	pets
Cases	14	2	4	2	1	1	3	3

Fourteen of the 27 respondents were alone during the ACASI portion of the interview. Six of the fourteen respondents had others present during the CAPI portion of the interview, but when the ACASI portion started those other individuals in the room left or were asked to leave by the respondent. In addition, two respondents went from having other adults present for some part of the CAPI to “one or more people, not within hearing range” in ACASI and therefore gained privacy. This deters others from hearing the questions and responses. Although interruptions did happen, the respondent was able to maintain a “bubble of privacy” around his/her responses in the cases where privacy was maintained by the FR.

During ACASI five respondents asked the FR questions. One respondent needed help locating the keys on the keyboard, and another respondent needed help with the height question. Specifically when respondents are asked to move from one box to another, the respondent had trouble with this task. Another respondent initially asked how to toggle and select answers and was given verbal directions by the FR on how to use the select key. Lastly, two respondents had questions on how to start the ACASI once the laptop was in front of them.

The 50 case field-test did not include an exit instruction screen at the end of the ACASI module, thus upon finishing the module three respondents either stated “I’m done. How do I get out of this?” or “I pressed the red button,” which indicated that they had finished. It is possible that other respondents would also benefit from having a final screen with instructions on how to finish the ACASI part and return the laptop to the FR.

Few problems were observed in terms of laptop usability. Those that were observed were easily solved by the FRs. The table below shows the types of problems that were observed during the interviews. For instance, when a respondent tried to use the screen as a touchscreen the FR informed her that she needed to use the keyboard. Overall, however, as the table below shows, 21 of the observed cases had no visible usability problems.

Usability Problems

	R attempt to answer by touching the screen	R attempt to use the mouse pad instead of the keyboard	R have trouble using the keys to select and enter answers	none
cases	1	2	2	21

Respondents were not directly asked their reaction to the recorded voice reading the ACASI questions; consequently respondents had few comments about the voice. Among those who expressed anything about voice, six respondents had a positive reaction to it and said that the voice was “pleasant,” “nice,” or “easy to follow.” Two respondents commented on the speed of the voice and both stated that the voice was too slow. Finally, one respondent commented that the tone of the voice changed during the interview.

Reactions to Voice

	No comment	voice was slow	Positive response to voice	other comment
cases	14	2	6	1

As respondents worked their way through ACASI, Field Representatives had to wait for respondents and be available in the meantime to answer questions. The table below reports on the observations of what happened during the ACASI portion of the interview and the activities of the FRs during this time:

Field Representatives Activity During ACASI Module (Categories are not exclusive)

	N/A	filled out form	chatted with other people	sat quietly	interrupted R	violated R privacy
Cases	5	14	5	2	2	2

In the majority of cases (18 interviews), the FRs filled out the forms provided for them or sat quietly waiting for the respondent to complete the ACASI. In a few cases (5 interviews), the FR talked with other people in the room, attempting to have a conversation with the observer or other individuals in the household. In two cases the FR interrupted the respondent, and asked questions and made comments about the area and the respondent’s home. Upon further analysis we determined that these instances came from two FRs. There are a variety of ways to manage the distractions generated in the field. For example, during training we must stress that FRs should not be a source of distraction during ACASI. Below is a model how FRs can manage their time during the ACASI. The observer described the Field Representative’s behavior during an interview:

FR sat next to R during the practice questions and told R that she would go over the practice questions in case she had any questions. Once the practice questions were over the FR moved away to the chair across from R and said she was

moving to give R her privacy but could answer questions. While waiting FR started filling out the FR form and once she was done with the form she sat and waited. (00000261)

Tips on what to do during this waiting time would benefit FRs and enhance the ACASI experience for respondents. In addition, following the appropriate protocol ensures privacy for respondents and increases data quality by reducing distractions that are under the control of the FR.

Conclusions and Recommendations

General Protocol

- Given the observed problems with maintaining privacy during ACASI FR training should emphasize the importance of privacy for respondents without increasing the threat level of the questions as compared to the previous sections.
- In order to increase FR to “buy into” the new program and work on proper implementation training should also emphasize the reasons for ACASI implementation.

Transition from CAPI to ACASI

- We suggest a redesign of the existing transition screens. Our recommendation is to collapse the two existing screens into one screen. One screen will reduce interviewer burden and make the computer transfer to respondents smoother.
- We also recommend that respondent start with an instruction screen that allows them to initialize ACASI. In this case it would be useful to look at the screens QDRL tested since these were successful in transitioning respondents into the program.
- Due to the importance of the transition from CAPI to ACASI we recommend making emphasis on the transition script during training. The script is a tool to use in the field to reduce the amount of questions and problems FRs will face with respondents.
- At times respondents wanted to use their own listening devices and during the interviews we discovered that not all of the headphones are compatible with the laptops used in the field. A solution for this situation is to offer two types of listening devices (ear buds and headphones) for respondent comfort and at the end of interview allow respondents to keep listening devices for sanitary reasons.
- We should provide instructions on what types of headphones are compatible with census laptops and how to correctly connect them to the laptop.

ACASI

- We should increase the capacity of FRs to deal with a range of respondents by introducing different scenarios during training for different types of respondents. We recommend training in scenarios that include respondents who are: resistant to technology, not wanting to use technology, wanting to use a proxy.

- During training we recommend and emphasize on the role of the FR during ACASI as a resource for respondents, to answer questions and deal with any problems that may arise. One suggestion to reducing any distractions generated by the FRs during ACASI is to provide tips on what to do during the ACASI waiting time.
- We recommend that FRs are provided with a guide for solving the most common ACASI technical problems.

Appendix 1

ACASI QUESTIONS TO BE TESTED

These questions are about you and your life.

1. How often do you use a computer?

Never or almost never
Some days
Most days
Every day
I don't know
I don't want to answer

2. In general, how satisfied are you with the health care you received in the past 12 months?

Very satisfied
Somewhat satisfied
Somewhat dissatisfied
Very dissatisfied
I haven't had health care in the past 12 months
I don't know
I don't want to answer

3. How tall are you without shoes? First, please [CIRCLE] the number of feet, then press [Enter].

one foot tall
two feet tall
three feet tall
four feet tall
five feet tall
six feet tall
seven feet tall
eight feet tall
nine feet tall
ten feet tall
I don't know the answer
I don't want to answer

Now please [CIRCLE] number of inches and then press [Enter].

no inches
one inch
two inches
three inches
four inches
five inches
six inches
seven inches
eight inches

nine inches
ten inches
eleven inches
twelve inches
I don't know the answer
I don't want to answer

4. How much do you weigh without shoes? Type in the number of pounds and then push [ENTER].

_____Number of pounds
I don't know the answer
I don't want to answer

5. When you were 6 years old, who did you live with most of the time?

My mother only
My father only
Both my mother and father
I did not live with either parent
I don't know
I don't want to answer

6. When you were 16 years old, who did you live with most of the time?

My mother only
My father only
Both my mother and father
I did not live with either parent
I don't know
I don't want to answer

7. Where any of your grandparents born in the United States?

Yes (Go to 7a)
No (Go to 8)
I don't know
I don't want to answer

7a. How many of your grandparents were born in this country?

1

2

3

4

I don't know

I don't want to answer

8a. For men: Do you think of yourself as

Gay

straight, that is, not gay

bisexual

something else

I don't know

[If something else is selected]

By something else, do you mean that...

You are not straight, but identify with another label such as queer, trisexual, omnisexual or pan-sexual

You are transgender, transsexual or gender variant

You have not figured out or are in the process of figuring out your sexuality

You do not think of yourself as having sexuality

You do not use labels to identify yourself

You made a mistake and did not mean to pick this answer

You mean something else

You don't know

You don't want to answer

8b. For women: Do you think of yourself as

Lesbian or Gay

Straight, that is, not gay

Bisexual

Something Else

I don't know

[If something else is selected]

By something else, do you mean that...

You are not straight, but identify with another label such as queer, trisexual, omnisexual or pan-sexual

You are transgender, transsexual or gender variant

You have not figured out or are in the process of figuring out your sexuality

You do not think of yourself as having sexuality

You do not use labels to identify yourself

You made a mistake and did not mean to pick this answer

You mean something else

You don't know

You don't want to answer

The next questions ask how concerned you are right now about financial matters.

9. How concerned are you right now about not having enough money for retirement? Are you
very worried
moderately worried
not too worried
not worried at all
I don't know the answer
I don't want to answer

10. How concerned are you right now about not being able to pay medical costs of a serious illness or accident? Are you
very worried
moderately worried
not too worried
not worried at all
I don't know the answer
I don't want to answer

11. How concerned are you right now about not being able to maintain the standard of living you enjoy? Are you
very worried
moderately worried
not too worried
not worried at all
I don't know the answer
I don't want to answer

12. How concerned are you right now about not being able to pay medical costs for normal healthcare? Are you
very worried
moderately worried
not too worried
not worried at all
I don't know the answer
I don't want to answer

13. How concerned are you right now about not having enough money to pay for your children's college? Are you
very worried
moderately worried
not too worried
not worried at all
I don't know the answer
I don't want to answer

14. How concerned are you right now about not having enough to pay your normal monthly bills? Are you

very worried
moderately worried
not too worried
not worried at all
I don't know the answer
I don't want to answer

15. How concerned are you right now about not being able to pay your rent, mortgage, or other housing costs? Are you

very worried
moderately worried
not too worried
not worried at all
I don't know the answer
I don't want to answer

16. How concerned are you right now about not being able to make the minimum payments on your credit cards? Are you

very worried
moderately worried
not too worried
not worried at all
I don't know the answer
I don't want to answer

17. On average, how many hours of sleep do you get in a 24-hour period?

one hour or less
two hours
three hours
four hours
five hours
six hours
seven hours
eight hours
nine hours
ten hours
eleven hours
twelve or more hours
I don't know
I don't want to answer

18. In the past week, how often did you have trouble falling asleep?

I didn't have trouble falling asleep in the past week
One time
two times
three times
four times
five times
six times

seven or more times
I don't know
I don't want to answer

19. In the past week, how many times did you have trouble staying asleep?

I didn't have trouble staying asleep in the past week
One time
two times
three times
four times
five times
six times
seven or more times
I don't know
I don't want to answer

20. In the past week, how many times did you take medication to help you fall asleep or stay asleep?

I did not take medication to help me sleep in the past week
one time
two times
three times
four times
five times
six times
seven or more times
I don't know
I don't want to answer

21. In the past week, on how many days did you wake up feeling well rested?

I never woke up feeling rested last week
One time
two times
three times
four times
five times
six times
seven or more times
I don't know
I don't want to answer

Now I am going to ask you some questions about feelings you may have experienced over the PAST 30 DAYS.

22. DURING THE PAST 30 DAYS, how often did you feel

... So sad that nothing could cheer you up?

ALL of the time
MOST of the time
SOME of the time
A LITTLE of the time
NONE of the time
I don't know
I don't want to answer

23. During the PAST 30 DAYS, how often did you feel

... Nervous?

ALL of the time
MOST of the time
SOME of the time
A LITTLE of the time
NONE of the time
I don't know
I don't want to answer

24. During the PAST 30 DAYS, how often did you feel

... Restless or fidgety?

ALL of the time
MOST of the time
SOME of the time
A LITTLE of the time
NONE of the time
I don't know
I don't want to answer

25. During the PAST 30 DAYS, how often did you feel

... Hopeless?

ALL of the time
MOST of the time
SOME of the time
A LITTLE of the time
NONE of the time
I don't know
I don't want to answer

26. During the PAST 30 DAYS, how often did you feel

... That everything was an effort?

ALL of the time
MOST of the time

SOME of the time
A LITTLE of the time
NONE of the time
I don't know
I don't want to answer

27. During the PAST 30 DAYS, how often did you feel

...Worthless?

ALL of the time
MOST of the time
SOME of the time
A LITTLE of the time
NONE of the time
I don't know
I don't want to answer

Universe statement: Sample adults 18+ who at least some of the time have felt sad, nervous, restless or fidgety, hopeless, that everything was an effort, or worthless, in the past 30 days

28. We just talked about a number of feelings you had during the PAST 30 DAYS.
Altogether, how MUCH did these feelings interfere with your life or activities: a lot,
some, a little, or not at all?

A lot
Some
A little
Not at all
I don't know
I don't want to answer

29. The next question is about the test for HIV (the virus that causes AIDS). Except for tests
you may have had as part of blood donations, have you ever been tested for HIV?

Yes
No
I don't know
I don't want to answer

**These next questions are about drinking alcoholic beverages. Included are liquor such as
whiskey or gin, beer, wine, wine coolers, and any other type of alcoholic beverage.**

30. In ANY ONE YEAR, have you had at least 12 drinks of any type of alcoholic beverage?

Yes (Go to Q32)
No (Go to Q31)
I don't know
I don't want to answer

31. In your ENTIRE LIFE, have you had at least 12 drinks of any type of alcoholic
beverage?

Yes

No

I don't know

I don't want to answer

32. In the PAST YEAR, how many days did you drink any type of alcoholic beverage?

_____ number of days drank any alcoholic beverage in the past year

I don't know

I don't want to answer

33. In the PAST YEAR, on those days that you drank alcoholic beverages, on the average,
how many drinks did you have?

_____ drinks per day

I don't know

I don't want to answer

34. In the PAST YEAR, on how many DAYS did you have 5 or more drinks of any alcoholic
beverage?

_____ number of days you drank 5 or more drinks

I don't know

I don't want to answer

Appendix 2

NHIS CAPI & ACASI FIELD TEST OBSERVATION FORM

Instructions:

Complete one form for each observed case.

CASEID:

Name of Observer:

Date (MM/DD/YY): / /

First Keystroke:

Enter Time (HR:MIN): : AM/PM

CAPI INTERVIEW

1. Time CAPI interview began until start of ACASI explanation _____(min:sec)

2. Where did the CAPI interview take **place**?

- ☐ Inside R's house
- ☐ Immediately outside (e.g., porch)
- ☐ Outdoor, Away from house
- ☐ Other: Describe:

3. **Where** was the computer? (during CAPI)

- ☐ Table
- ☐ Interviewer's lap, sitting down
- ☐ Interviewer's arm, standing up
- ☐ Other: Describe:

4. **Who** was present during CAPI portion of the interview? Note any changes of who was present during the time of interview.

- ☐ No one; (only respondent, interviewer and observers)
- ☐ One or more people, but not within hearing range
- ☐ One or more people, in hearing range, some of the time
- ☐ One or more people, in hearing range, entire interview

5. **Atmosphere** of interview site:

- ☐ Extremely chaotic and noisy, disruptive to interview
- ☐ Some noise or interruptions
- ☐ Very quiet and calm, ideal for interview
- ☐ Other: Describe:

6. Describe distractions:

CAPI to ACASI TRANSITION

7. **Time** from start of ACASI explanation to R pressing first key: _____ (min:sec)

8. Describe **how** interviewer gave computer to respondent:

9. Did Interviewer follow the **script**?

☐ Yes

☐ No: Describe

10. Did R **move** the computer?

☐ No, did not touch the computer except to answer the question

☐ Yes, but only a little to see the screen better

☐ Yes, R moved the computer: Describe:

11. List problems that occurred during the transition from CAPI to ACASI:

ACASI INTERVIEW

12. **Time** of R pressing first key to end of ACASI: _____ (min:sec)

13. **Where** did the ACASI portion take **place**?

- ☐ Inside R's house
- ☐ Immediately outside (e.g., porch)
- ☐ Outdoor, Away from house
- ☐ Other: Describe:

14. **Who** was present during the ACASI interview? Note any changes of who was present during the time of interview.

- ☐ No one; (only respondent, interviewer and observers)
- ☐ One or more people, but not within hearing range
- ☐ One or more people, in hearing range, some of the time
- ☐ One or more people, in hearing range, entire interview

15. Did the Respondent try to include another family/household member in the ACASI interview?

- ☐ No
- ☐ Yes: Describe:

16. **Where** was the **computer**? (during ACASI)

- ☐ Table
- ☐ Respondents lap, sitting down
- ☐ Interviewer's arm, standing up
- ☐ Other: Describe:

17, Did the respondent **ask for help**?

☐ No

☐ Yes: Describe:

18. During the ACASI, write down anything the **respondent says**:

19. Types of usability issues observed please mark all that you observed

☐ Did R have **trouble using the keys** to select and enter answers?

☐ Was R **afraid** of doing something wrong or breaking the computer?

☐ Did R attempt to **use the mouse** instead of the keyboard?

☐ Did R attempt to answer by **touching the screen**?

☐ Did R provide a **verbal response** to the question instead of pressing a key?

☐ Other: Describe

20. **How long** did the respondent use the **headphones**?

- ☐ No/took headphones off immediately
- ☐ Some of the time
- ☐ All of the ACASI interview

21. Did the respondent **mention anything about the voice**?

- ☐ No
- ☐ Yes: Describe

22. Did the Respondent finish the ACASI?

- ☐ No
- ☐ Yes: Describe

23. What did the interviewer do during the ACASI interview?

Other comments and observations including a description of the respondent's comfort level with ACASI

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